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April 12, 1965

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MONTHLY PROGRESS REPORT NO. 1
CONTRACT [redacted] STATINTL
Period - Month of March, 1965

1. PROGRESS ACCOMPLISHED

1.1 During the first month of this research contract, the primary concern was personnel, laboratory space and equipment requirements. In addition, the proposed experimental and testing apparatus was set up.

1.1.1 In order to maintain continuity, two of our personnel who have been involved with the dipole studies have been assigned to this research program. These men have been supplemented with a senior and a junior scientist. The senior man having many years experience with photosensitive and photoconductive materials.

1.1.2 Laboratory space has been prepared for this program and the necessary laboratory equipment procured.

1.1.3 The experimental and testing apparatus required to evaluate the response characteristics of our dipole and photoconductive materials has been fabricated. A two (2) inch diameter test cell has been made and our preliminary work will be done with this cell. Some four (4) inch diameter quartz windows have been ordered so that a larger cell can be employed.

1.1.4 Various grades of zinc oxide have been obtained which will be employed with our dipole suspension, in a first attempt to achieve the desired photoconductive effect. Other organic and inorganic materials are also being requisitioned.

1.2 Quantitative measurements of the light sources used and the response data of the cells will be recorded and photographed by means of the [redacted] Memoscope which will be greatly modified to suit our requirements. STATINTL

1.3 A mathematical-pysics analysis of the phenomenon being investigated will be made after a preliminary exploration of various effects. This analysis will take into consideration such factors as the mobilities of the ionic particles, the thickness of the cell, amplitude and time duration of the applied voltage pulse, the intensity, and time duration of the ultraviolet pulse, dipole characteristics and other factors.

2. Difficulties Encountered

No difficulties have been encountered.

3. Future Work

3.1 The studies that have been initiated will be continued.

3.2 Additional methods and materials that may produce the required photoconductive effect will be investigated.

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